

**Notice of Allowability**

Application No.

10/686,894

Examiner

Arnel C. Lavarias

Applicant(s)

KARAM, RAYMOND MILLER

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/27/05.
2. ☒ The allowed claim(s) is/are 23-26, 29-44 (renumbered 1-20).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
- ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
- ☐ Examiner's Amendment/Comment
- ☒ Examiner's Statement of Reasons for Allowance
- ☐ Other \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendments to the specification and abstract of the disclosure in the submission dated 10/27/05 are acknowledged and accepted. In view of these amendments, the objections to the specification in Sections 5-6 of the Office Action dated 7/12/05 are respectfully withdrawn.
2. The amendments to Claims 23-26, 29 in the submission dated 10/27/05 are acknowledged and accepted.
3. The cancellation of Claims 1-22, 27-28 in the submission dated 10/27/05 is acknowledged and accepted.
4. The addition of Claims 30-44 in the submission dated 10/27/05 is acknowledged and accepted.
5. In view of the amendments made to the claims and specification above, the objections to the specification and claims in Sections 7-8 of the Office Action dated 7/12/05 are respectfully withdrawn.

### ***Response to Arguments***

6. The Applicant's arguments, see in particular Pages 10-12 of the submission, filed 10/27/05, with respect to the rejections of Claims 23-29, have been fully considered and are persuasive. The rejections of Claims 23-29 in Sections 10-14 of the Office Action dated 7/12/05 have been withdrawn.

*Allowable Subject Matter*

7. Claims 23-26, 29-44 are allowed.

**REASONS FOR ALLOWANCE**

8. The following is an examiner's statement of reasons for allowance:

Claim 23 is allowable over the cited art of record for at least the reason that the cited art of record fails to teach or reasonably suggest a system for forming a reflective grating from a tape having a substrate, an adhesion layer, and a reflective surface layer affixed to the substrate by the adhesion layer, as generally set forth in Claim 23, the system including, in combination with the features recited in Claim 23, the laser spot sequentially writing discrete grating lines by vaporizing portions of the reflective surface layer to expose the adhesion layer, and a scan head for synchronizing a path of the laser spot with a motion of the tape so that the discrete grating lines are substantially orthogonal to the axis of motion of the tape. Claims 24-26, 29 are dependent on Claim 23, and hence are allowable for at least the same reasons Claim 23 is allowable.

Claim 30 is allowable over the cited art of record for at least the reason that the cited art of record fails to teach or reasonably suggest a system for forming a reflective grating tape, as generally set forth in Claim 30, the system including, in combination with the features recited in Claim 30, a scan head for scanning a laser spot generated by the laser across the reflective surface to define discrete parallel lines on the reflective surface layer, the parallel lines being aligned substantially perpendicular to the conveying

direction of the tape, the laser spot vaporizing the reflective surface layer along the parallel lines to generate grating lines as the tape is drawn across the surface of the platen. Claims 31-44 are dependent on Claim 30, and hence are allowable for at least the same reasons Claim 30 is allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Conclusion*

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5364493 to Hunter, Jr. et al.

Hunter, Jr. et al. is being cited to evidence a conventional apparatus and process for producing fine metallic traces using a laser beam to perform etching or ablation on the substrate (See for example Abstract; Figures 1-2, 4). However, it is noted that such apparatus and process does not sequentially write discrete grating lines, and instead is used to etch or ablate features in an etch stop, which is then further wet or dry etched in a second step to generate the required features. In addition, Hunter, Jr. et al. is silent with regard to the orientation of the features (i.e. traces) with respect to the motion of the substrate.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 571-272-2315. The examiner can normally be reached on M-F 9:30 AM - 6 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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12/30/05